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UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/779,844	02/09/2001	Sawao Iwatani	21.1993	5417

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EXAMINER
VU, THONG H

ART UNIT	PAPER NUMBER
2142	

DATE MAILED: 03/08/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

PTO-90C (Rev. 10/03)

Office Action Summary

	Application No.	Applicant(s)
	09/779,844	IWATANI, SAWAO
	Examiner	Art Unit
	Thong H Vu	2142

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) FROM
THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed
  after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any
  earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on <u>23 September 2004</u>.

2a)☐ This action is **FINAL**.   2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is
closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) <u>1-26</u> is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) <u>1-26</u> is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on <u>09 February 2001</u> is/are: a)☒ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage
application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☒ Notice of References Cited (PTO-892)
2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3)☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
    Paper No(s)/Mail Date _____.

4)☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____.
5)☐ Notice of Informal Patent Application (PTO-152)
6)☐ Other: _____.

1.   Claims 1-26 are pending.

Response to Arguments

2.   Applicant's arguments with respect to claims 1-26 have been fully considered

and are persuasive. Therefore, the previous rejection and Allowable Subject matter

have been withdrawn. However, upon further consideration, a new ground(s) of

rejection is made in view of McCormack-Blumenau.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that

form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by
> another filed in the United States before the invention by the applicant for patent or (2) a patent
> granted on an application for patent by another filed in the United States before the invention by the
> applicant for patent, except that an international application filed under the treaty defined in section
> 351(a) shall have the effects for purposes of this subsection of an application filed in the United States
> only if the international application designated the United States and was published under Article 21(2)
> of such treaty in the English language.

Claims 4-7,20-26 are rejected under 35 U.S.C. § 102(e) as being anticipated by

McCormack et al [McCormack 6,360,255 B1].

3.   As per claim 20, McCormack discloses a method of a storage area network

system [McCormack, abstract], comprising:

integrating and controlling the storage area network by an integrated

management mechanism managing access relationships between host computers of

the storage area network and storage devices of the storage area network [McCormack,

a network management server, col 4 line 55 et seq; integrating an external network with

a network management system, col 15 lines 24-42].

4.   As per claim 21, McCormack discloses establishing access paths between the

host computers and the storage devices, said access paths being established and

controlled by the integrated management mechanism [McCormack, the network routing

device information, col 17 lines 1-22].

5.   ·   As per claim 22, McCormack discloses controlling by the integrated management

mechanism access to regions of the storage devices by the host computers network

[McCormack, a network management server, col 4 line 55 et seq; integrating an

external network with a network management system, col 15 lines 24-42; a command

region, col 9 lines 35-49].

6.   As per claim 23, McCormack discloses establishing by the integrated

management mechanism storage affinity (i.e.: setting) based on the access paths

[McCormack, create a customized view of the software upgrade information that is

pertinent to the network device configuration of network, col 9 lines 16-30].

7.   As per claim 24, McCormack discloses establishing zoning for switches

interconnecting the host computers and the storage devices of the storage area network

[McCormack, a command region, col 9 lines 35-49].

8.   As per claim 25, McCormack discloses establishing settings in storage

management mechanisms of respective storage devices [McCormack, create a

customized view of the software upgrade information that is pertinent to the network

device configuration of network, col 9 lines 16-30].

9.   As per claim 26, McCormack discloses the integrated management mechanism

integrates related, reported problems into a single problem report [McCormack, a

problem report mechanism, col 13 lines 30-53].

10.   As per claim 4, McCormack discloses a Host computers in a storage area

network system including storage devices and switches interconnecting the storage

devices and the host computers, each of said host computers comprising:

        an integrated management mechanism integrating and managing the storage

area network system, and establishing access information for the storage devices

based on access management information transmitted to the storage devices from the

integrated management mechanism [McCormack, a network management server,

routers, switches, col 4 line 36 et seq; integrating an external network with a network

management system, col 15 lines 24-42].

11.   As per claim 5, contains a similar limitations set fort in claim 4. Therefore claim 5

is rejected for the same rationale set forth in claim 4.

12.   As per claim 6, McCormack discloses a Storage devices in a storage area

network system including host computers and switches, and an integrated management

mechanism integrating and managing the storage area network system, each of said

storage devices comprising:

a storage management mechanism establishing conditions of access restrictions

for the storage device based on access restriction information (i.e.: a private network,

intranet) transmitted by the integrated management mechanism, said switches

interconnecting the host computers and the storage devices [McCormack, a network

management server, routers, switches, Intranet, col 4 line 36 et seq; integrating an

external network with a network management system, col 15 lines 24-42].

13.   As per claim 7, contains a similar limitations set fort in claim 6. Therefore claim 7

is rejected for the same rationale set forth in claim 6.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set
> forth in section 102 of this title, if the differences between the subject matter sought to be patented and
> the prior art are such that the subject matter as a whole would have been obvious at the time the
> invention was made to a person having ordinary skill in the art to which said subject matter pertains.
> Patentability shall not be negatived by the manner in which the invention was made.

Claims 1-3,8-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over

McCormack et al [McCormack 6,360,255 B1] in view of Blumenau et al [Blumenau, col

6,421,711 B1].

14.   As per claim 1, McCormack discloses a storage area network management

system comprising:

host computers, each comprising a storage area network management

mechanism; storage devices, each comprising a storage management mechanism;

switches coupled to the host computers and to the storage devices, said switches

interconnecting the host computers and the storage devices, each of the switches

comprising a region-setting mechanism [McCormack, a network management server,

routers, switches, Intranet, col 4 line 36 et seq; integrating an external network with a

network management system, col 15 lines 24-42; a command region, col 9 lines 35-49];

McCormack also taught the SNMP connection with network devices

[McCormack, col 8 lines 16-37]. However McCormack does not explicitly detail the route

information such as

an integrated management mechanism integrating and controlling the storage

area network, said integrated management mechanism including access **route**

information of the host computers and the storage devices and, based on said access

route information, transmitting access management information to the storage devices

and the storage area network management mechanisms of the host computers,

transmitting region information to the region-setting mechanisms of the switches, and

transmitting access limit (i.e.: restrict) information concerning the host computers to the

storage management mechanisms of the storage devices.

A skilled artisan would have motivation to improve the access between the host

and the storage device and found Blumenau's teaching.

In the same endeavor, Blumenau discloses a point of integration for the management interfaces of the entities such as data network [Blumenau ,col 42 lines 20-30] including different geographical locations [Blumenau, col 9 lines 5-16] and using the routing instructions from a host for routing data access requests to a specified port [Blumenau, col 23 lines 1-7], restrict the set of volumes [Blumenau, col 12 lines 1-67]

Therefore it would have been obvious to an ordinary skill in the art at the time the invention was made to incorporate the routing information for integration and management the data network devices as taught by Blumenau into the McCormack's apparatus in order to utilize the integration and management processes. Doing so would provide a flexibility and reliability for a host accesses to a data storage network.

15.   As per claim 2, McCormack-Blumenau disclose the integrated management mechanism obtaining a configuration status of the storage area network from each of the storage devices, the switches, and the host computers and stores said configuration status as storage area network configuration settings information [Blumenau, the loading conditions on any ports, col 34 lines 11-40], and wherein at regular intervals, or when instructed by a system administrator, the integrated management mechanism gathers current configuration status of the storage area network, compares the current configuration status to the configuration settings information that was collected, and detects discrepancies based upon the comparison [McCormack, monitoring the status of a device in the network, col 1 lines 20-35].

16.   As per claim 3, McCormack-Blumenau disclose the integrated management

mechanism obtaining information on the access relationships from the host computer

storage area network management mechanism, switches and/or the storage devices,

and checking the compatibility of the access paths and, if the integrated management

mechanism finds any access paths which are **not** set up correctly, sending out a notice

about problems in a section corresponding thereto [Blumenau, state change notification,

col 11 lines 42-55].

17.   As per claim 15, McCormack-Blumenau disclose a storage area network system

comprising:

        host computers; storage devices, each comprising a storage management

mechanism; switches interconnecting the host computers and the storage devices; and

an integrated management mechanism integrating and controlling the storage area

network and comprising access path information of the host computers and storage

devices, wherein using said access path information, the integrated management

mechanism transmitting access management information to the storage devices and to

the storage area network management mechanism, transmitting region information to

switch region-setting mechanisms, and transmitting access restriction information

concerning the host computers to the storage management mechanisms of the storage

devices [McCormack, a network management server, routers, switches, private network

or Intranet, col 4 line 36 et seq; integrating an external network with a network

management system, col 15 lines 24-42; a command region, col 9 lines 35-49],

wherein when the storage area network management system is started up and

the access path information has not been set up the integrated management

mechanism first sets up the region-setting mechanisms of the switches so that no

access is permitted (i.e.: a new device), and, after that, the integrated management

mechanism sets up regions on the regions setting mechanisms of the switches

[Blumenau, replace and configuration a new host controller, col 30 lines 17-29].

18.   As per claim 8, McCormack-Blumenau disclose a computer-readable medium

including a program which program, when executed by a computer, causes the

computer to execute the processes comprising:

integrating and controlling a storage area network including host computers and

storage devices connected by switches through fiber channels [Blumenau, a Fibre

Channel network, col 9 line 58 et seq]

transmitting access management information to the storage devices and storage

area network management mechanisms of the host computers based on the access

path information of the storage devices and the host computers, transmitting region

information to region setting mechanisms of the switches, transmitting access restriction

information about the host computers to storage management mechanisms of the

storage devices, and managing access relationships between the hosts and storage

devices [McCormack, a network management server, routers, switches, private network

or Intranet, col 4 line 36 et seq; integrating an external network with a network

management system, col 15 lines 24-42; a command region, col 9 lines 35-49].

19.   As per claims 9-14,17-19 contain a similar limitations set fort in claims 1-3.

Therefore claims 9-14,17-19 are rejected for the same rationale set forth in claims 1-3.

20.   Any inquiry concerning this communication or earlier communications from the examiner should be directed to examiner Thong Vu, whose telephone number is (571)-272-3904. The examiner can normally be reached on Monday-Thursday from 8:00AM-4:30PM.
        If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, *Jack Harvey*, can be reached at (571) 272-3896. The fax number for the organization where this application or proceeding is assigned is 703-872-9306.
        Information regarding the status of an application may be obtained from the Patent Application Information Retrieval IPAIRI system. Status information for published applications may be obtained from either Private PMR or Public PMR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Thong Vu
Patent Examiner
Art Unit 2142